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ABSTRACT

The following course outline has been prepared as a guide to help the student become aware of and perform operations concerned with offset lithography, intaglio printing, screen process printing, and the allied occupations. A prerequisite to the course is "Meet the Press." The total number of hours of instruction is 45 of which approximately 30 hours are for practical application of knowledge and skills. The remaining 15 hours are for lectures and demonstrations. The outline consists of seven major blocks of instruction, which are subdivided into several units each. Included are course goals, specific block objectives, a course outline, a five-item bibliography, a film, and an appendix of Quinmester posttest samples. (Author/BP)

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AUTHORIZED COURSE OF INSTRUCTION FOR THE QUINMESTER PROGRAM

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Course Outline

GRAPHIC COMMUNICATIONS 7-9 PREVOCATIONAL - 5839
(Meet the Printer)

Department 48 - Quin 5839.06

CE 001 088

DADE COUNTY PUBLIC SCHOOLS

DIVISION OF INSTRUCTION • 1973

ED 096398

DADE COUNTY PUBLIC SCHOOLS

1450 NORTHEAST SECOND AVENUE

MIAMI, FLORIDA 33132

Course Outline

GRAPHIC COMMUNICATIONS 7-9 PREVOCATIONAL - 5839
(Meet the Printer)

Department 48 - Ouin 5839.06

county office of

VOCATIONAL AND ADULT EDUCATION

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Dade County Public Schools
Miami, Florida 33132

September, 1973

Published by the School Board of Dade County

Course Description

5839	48	5839.06	Meet the Printer
State Category Number	County Dept. Number	County Course Number	Course Title

The student will be involved in the process of Offset Lithography, Intaglio Printing, Screen Process Printing and the Allied Occupations.

Clock Hours: 45

PREFACE

The following course outline has been prepared as a guide to help the student become aware of and perform operations concerned with Offset Lithography, Intaglio Printing, Screen Process Printing and the Allied Occupations.

With the printing industry being a prime source of many consumer products and materials, every effort should be exerted to help the student in becoming aware of some basic operations involved in the commonly used printing processes.

"Meet The Printer" is a basic course designed to increase consumer understanding of printing processes and printed materials. A student entering this course must have had "Meet The Press" or demonstrate a mastery of skills by taking and satisfactorily passing a written and/or performance test in "Meet The Press".

The toal number of hours of instruction is 45 of which approximately 30 hours are for practical application of knowledge and skills. The remaining 15 hours are for lectures and demonstrations.

The outline consists of seven major blocks of instruction, which are subdivided into several units each.

This outline was developed through the cooperative efforts of the Instructional and Supervisory Personnel, the Advisory Committee and the Vocational Curriculum Materials Service, and has been approved by the Dade [redacted]y Vocational Curriculum Committee.

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with Suggested Hourly Breakdown

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GOALS

As a result of his learning experiences, the student will be able to:

1. List in chronological order steps in the development of printing.

2. Compare in writing methods of printing during the 19th Century with those used today.

3. List step by step procedure for Offset Printing, from Camer-Ready Copy, to finished printed job.

4. Perform operations necessary to produce a copper plate engraving, a steel plate engraving and a dry-point etching in Intaglio Printing.

5. List and perform the operations necessary to produce a simple screen process print.

6. Perform operations necessary to produce an offset print from a camera-ready copy.

7. List at least three printing occupations.

SPECIFIC BLOCK OBJECTIVES

BLOCK I - ORIENTATION

The student must be able to:

1. State what will be expected of him as a student in "Meet The Printer".
2. Demonstrate a sense of responsibility to himself and his classmates by utilizing standard safety practices as outlined in the Safety Handbook.
3. State procedures for handling cleaning fluids and other unsafe materials used in the printing lab.

BLOCK II - HISTORY AND DEVELOPMENT OF PRINTING

The student must be able to:

1. State the methods by which printing was done prior to 1397.
2. State the major contribution of Johann Gutenberg to the printing industry.
3. List at least two individuals in addition to Gutenberg who were recognized for their contributions toward the development of printing between the period of 1468-1804.
4. List the five eras of printing and state at least one development of each period.

BLOCK III - OFFSET LITHOGRAPHY

The student must be able to:

1. Produce a camera-ready copy for a simple job, selected and approved by the instructor.
2. Perform all darkroom operations necessary in the production of the exposed film which is used in producing the flat.
3. Perform all operations necessary for the production of the press-ready plate.
4. Operate the Offset Press proficiently enough to produce copies which meet the standards of the instructor.

BLOCK IV - INTAGLIO PRINTING

The student must be able to:

1. Prepare a copper and steel plate engraving from which a set of prints may be made to meet standards as established by the instructor.

2. Perform all operations necessary to produce a dry-point etching which meets teacher's standards.

BLOCK V - SCREEN PROCESS PRINTING

The student must be able to:

1. List the basic silk screen tools and equipment used in this course and the purpose for which they are used.
2. Identify various screen process inks and material on which they may be used according to specifications given by the instructor.

BLOCK VI - PRINTING OCCUPATIONS

The student must be able to:

1. List the basic duties of a pressman for both Letterpress and Offset.
2. List the qualifications necessary for one to become a Pressman - Letterpress.
3. List the qualifications necessary for one to become a Pressman - Offset.
4. List the training necessary in becoming a Platemaker.
5. List the salary ranges for the various printing occupations as they now exist in the State of Florida.

BLOCK VII - QIUNMESTER POST TEST

The student must be able to:

1. Satisfactorily complete the Quinmester Post-Test.

Course Outline

GRAPHIC COMMUNICATIONS 7-9 PREVOCATIONAL - 5839
(Meet the Printer)

Department 48 - Quin 5839.06

I. ORIENTATION

A. Introduction to the Course
   1. Objectives of the Course
      a. Standards
      b. Methods of evaluation
      c. Teaching methods
   2. Student Responsibilities
      a. Fees and other financial requirements
      b. Safety regulations

B. Student Benefits
   1. Acquiring Skills and Knowledge
   2. Industrial Field Trips

II. HISTORY AND DEVELOPMENT OF PRINTING

A. Early Printing Methods
   1. Carving on Tables of Stone
   2. Payrus Roll

B. Early Printers
   1. Johann Gutenberg
      a. Movable type
      b. Gutenberg's Bible
   2. Johann Fust
   3. Peter Schoeffer
   4. Aldus Manutius

C. Progressive Development of Printing
   1. The Era of Beginnings (To 1397)
      a. Clay tables by Babylonians
      b. Use of papyrus plant
      c. Paper-making
   2. The Gutenberg Era (1397-1468)
      a. Printing with movable type
      b. The Gutenberg Bible
   3. The Typographic Era (1468-1620)
      a. Spreading of printing world-wide
      b. Invention of Italic Type
      c. Printing in several languages
      d. Improvements on platen press

4. The Early Journalistic Era (1620-1804)
   a. Growth of newspaper printing
   b. Benjamin Franklin
   c. First successful type foundry
   d. Caslon types
   e. Development of printer's point system
   f. Invention of first "Self Acting" printing press
5. The Mechanical Era (1804 to present)
   a. Invention of power-driven press
   b. Invention of typesetting machines
   c. The R. Hoe and Company Press Manufacturers
   d. Printing introduced in schools
   e. Halftone screen process of engraving

III. OFFSET LITHOGRAPHY

A. The Camera-Ready Copy
   1. Selecting the Job
      a. Nature of printed material
      b. Quantity of printed material needed
      c. Time allowed for printing job
   2. Selecting and arranging type
      a. Type sizes
      b. Type styles
   3. Methods of cleaning camera-ready copy
      a. Eraser
      b. Opaque

B. Darkroom Practices
   1. Safe lights
   2. Preparation of film-processing chemical
      a. Developer
      b. Hypo
      c. Fixer
   3. Camera operation
      a. Lighting
      b. Increasing or reducing copy
      c. Adjusting of f stop
      d. Timing

C. Plate-Making
   1. Preparing the flat
      a. Positioning film on masking sheet
      b. Fastening film to masking sheet
      c. Stripping
      d. Opaquing
   2. Selecting appropriate plate
   3. Exposing the plate
      a. Registration
      b. Timing

III. OFFSET LITHOGRAPHY (continued)

C. Plate-Making (continued)
4. Developing plate
a. Process gum
b. Developer
c. Polishing plate

D. Press Operations
1. Parts of the Offset Press
a. Function
b. Adjustments
c. Servicing and replacing parts
2. Water System
a. Water fountain
b. Fountain solution
3. Ink System
a. Ink fountain
b. Offset inks
4. Attaching Plate to Plate Cylinder
5. Feeding and Delivery Systems

IV. INTAGLIO PRINTING

A. Copper-Plate and Steel Plate Engraving
1. Types of Metal Used for Engraving
2. Preparation of Plate
a. Acid-resistant ground
b. Nitric acid
3. Printing the Plate
a. Inking the plate
b. Polishing the plate

B. Dry-Point Etching
1. Tools necessary
2. Types of inks

V. SCREEN PROCESS PRINTING

A. Equipment and Tools
1. Squeegee
a. Rubber
b. Plastic
c. Paper
2. Silkscreen frame
a. Wood
b. Metal
3. Silkscreen materials

B. Printing Procedures
1. Stencil preparation
a. Selecting the design
b. Making the stencil

2. Adhering lacquer film to screen
   a. Lacquer thinner
   b. Ink

3. Making the Print

C. Selection of Inks
   1. Textile inks
   2. Flat paper inks
   3. Gloss inks
   4. Water base ink

VI. PRINTING OCCUPATIONS

A. Pressman
   1. Training necessary
   2. Other qualifications
   3. Average salary
   4. Present needs

B. Platemaking
   1. Training necessary
   2. Equipment used
   3. Job demands
   4. Present day needs

C. Typesetting
   1. Hot type setting
      a. Training necessary
      b. Equipment used
      c. Job demand
      d. Present day needs
   2. Coldtype setting
      a. Training necessary
      b. Special equipment
      c. Job demands
      d. Present day needs

D. Salary Ranges

VII. QUINMESTER POST TEST

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3. Kagy, Frederick D. Graphic Arts. 2nd ed. Homewood, Illinois: The Goodheart Wilcox Company, 1965. Pp. 112.

4. Karach, Randolph R. Basic Graphic Arts Procedures. 4th ed. Chicago: American Technical Society, 1970. Pp. 409.

Supplementary References:

5. Catalog. Miami, Florida: General Printing Equipment and Supply, Inc.

Films:

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A P P E N D I X

Quinmester Post-Test Sample

Quinmester Post-Test

NAME_____DATE_____SCORE_____

Complete the following statements by inserting the correct word or words in the blank space.

1. The Gutenberg Era extended from 1397 to _____.

2. Johann Gutenberg is primarily recognized for the invention:

   a. Atomic energy
   b. Movable type
   c. The offset press
   d. Newspaper production

ANSWER KEY FOR QUINMESTER POST TEST

1. 1468

2. Movable type